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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, RIP A

ART UNIT PAPER NUMBER

1713

DATE MAILED: 11/29/2001

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/787,413	AUWETER ET AL.	
	Examiner	Art Unit	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 3.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-16 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5 and 6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to an amendment filed on March 22, 2001. Claims 1-11 were canceled, and new claims 12-16 were added.

Objections

1. The abstract of the disclosure is objected to because has not been written as one paragraph. Correction is required. See MPEP § 608.01(b).
2. Claim 14 is objected to because of the following informalities: The claim recites “polymer a” and “monomer a” within the same claim. It is uncertain whether these terms refer to the same entity. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 16 is rendered indefinite since it contains improper Markush language. According to MPEP 2173.05(h), when materials are so related as to constitute a proper Markush group, they may be recited as, “wherein R is a material selected from the group consisting of A, B, C, and D,” or “wherein R is A, B, C, or D.”

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,833,060 to Nair *et al.* in view of U.S. Patent No. 4,264,656 to Reeder.

The prior art of Nair *et al.* relates to a method of preparing polymer particles comprising steps of dissolving a polymer into a solvent and precipitating in the presence of water (claim 1), resulting in particles having an average size of 0.05-100 μm (col. 5, line 39). The reference teaches the use of colloidal stabilizer as standard practice in the art (claim 1, Examples). As the material is used as a toner particle, pigment is incorporated into the polymer (col. 5, line 45, Examples 2 and 6). The invention is applicable to poly(meth)acrylate homopolymers and copolymers (col. 4). The prior art does not recite the use of water-miscible organic solvent.

The use of a water-miscible organic solvent and water as the non-solvent for precipitation of compounds such as (co)polymers is hardly a novel concept in the chemical arts. The choice of the appropriate solvent for dissolving a material would appear to be dependent on the solubility of said material. Reeder describes methods for precipitating polymers by pouring ethanol solutions of the polymers into water (Examples 1, 6, 8 and 10). Apparently, these polymers were soluble in organic solvents that were miscible with water as well. Therefore, it would have been obvious to one having ordinary skill in the art to perform the process of Nair *et al.* by dissolving a polymer in a water-miscible solvent instead of a water-immiscible solvent because the polymer was soluble in the former, in order to arrive at the claims of the present invention.

8. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,965,131 to Nair *et al.* in view of Reeder.

The prior art of Nair *et al.* relates to the preparation of polymer particles with pigment dispersed within by precipitation of an organic solution of polymer and pigment into water. The process is facilitated by addition of a colloidal stabilizing agent (Example 4). The toner particles of the general invention have an average diameter in the range of from 0.1-100 μm (col. 11, line 28). The invention embraces the use of copolymers (claims 1 and 2) comprising nonionic oleophilic monomer, nonionic hydrophilic monomer, the identities of which are provided in col. 4 – col. 5 of the specifications and are encompassed within Claims 15 and 16 of the present invention. The prior art does not recite the use of water-miscible organic solvent.

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The discussion of the disclosures of the prior art of Reeder from paragraph 7 of this office action is incorporated here by reference. Briefly, Reeder describes methods for precipitating polymers by pouring ethanol solutions of the polymers into water. Therefore, it would have been obvious to one having ordinary skill in the art to perform the process of Nair *et al.* by dissolving a polymer in a water-miscible solvent instead of a water-immiscible solvent because the polymer was soluble in the former, in order to arrive at the claims of the present invention.

9. Claims 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,692,188 to Ober *et al.* in view of Reeder.

The prior art of Ober *et al.* relates to the preparation of ink compositions. The process involves dissolving polymer and dye in an organic solvent followed by precipitation of the resulting composition into an aqueous phase (claim 1). The particles have a diameter in the range of 0.3-1 μ (claim 2). Poly(methylmethacrylate) may be used as the polymer in this process (claims 6 and 8). The prior art does not recite the use of water-miscible organic solvent.

The discussion of the disclosures of the prior art of Reeder from paragraph 7 of this office action is incorporated here by reference. Briefly, Reeder describes methods for precipitating polymers by pouring ethanol solutions of the polymers into water. Therefore, it would have been obvious to one having ordinary skill in the art to perform the process of Nair *et al.* by dissolving a polymer in a water-miscible solvent instead of a water-immiscible solvent because the polymer was soluble in the former, in order to arrive at the claims of the present invention.

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10. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,665,107 to Micale over Reeder.

The prior art of Micale relates to pigment encapsulated latices. A process for preparing said materials comprises the steps of mixing a polymer and pigment in an organic solvent and adding the solution to water. This results in the formation of particles with an average diameter of less than 2 microns (claim 11). The discussion of the disclosures of the prior art of Reeder from paragraph 7 of this office action is incorporated here by reference. Briefly, Reeder describes methods for precipitating polymers by pouring ethanol solutions of the polymers into water. Therefore, it would have been obvious to one having ordinary skill in the art to perform the process of Nair *et al.* by dissolving a polymer in a water-miscible solvent instead of a water-immiscible solvent because the polymer was soluble in the former, in order to arrive at the claims of the present invention.

11. The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure.

U.S. Patent No. 5,290,654 to Sacripante *et al.*

U.S. Patent No. 5,968,702 to Ezenyilimba *et al.*

U.S. Patent No. 6,207,338 to Ezenyilimba *et al.*

EP 0 906 931 to Smith *et al.*

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3599. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.



DAVID W. WU
SUPERVISORY PATENT EXAMINER
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November 01, 2001